[a.] School of Material Science and Engineering, Jiangsu Collaborative Innovation Center for Photovoltaic Science and Engineering, Jiangsu Province Cultivation base for State Key Laboratory of Photovoltaic Science and Technology, Changzhou University, Changzhou 213164, China.Shandong Dongyue Silicone Material Co. ,Ltd., Zibo 256401, China;

[b.] School of Mechanical Engineering, Jiangsu University, Zhenjiang 212013, China.

Supporting Information

# Insight into the Probability of Ethoxy (pentafluoro) cyclotriphosphazene (PFPN) as the Functional Electrolyte Additives in Lithium-Sulfur Batteries

Ning Li[a1], Yu Zhang[a1], Shun Zhang[a], Lu Shi[b], Jie-Yu Zhang[a], Ke-Meng Song[a], Jin-Chun Li[a*], Fang-Lei Zeng[a*]

## Supplementary Figures

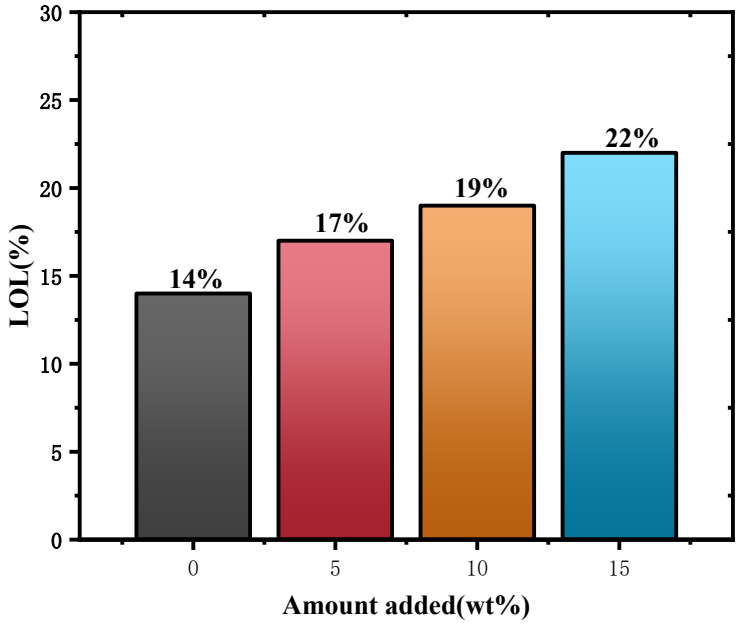


Fig S1. The limiting oxygen index of the different electrolyte

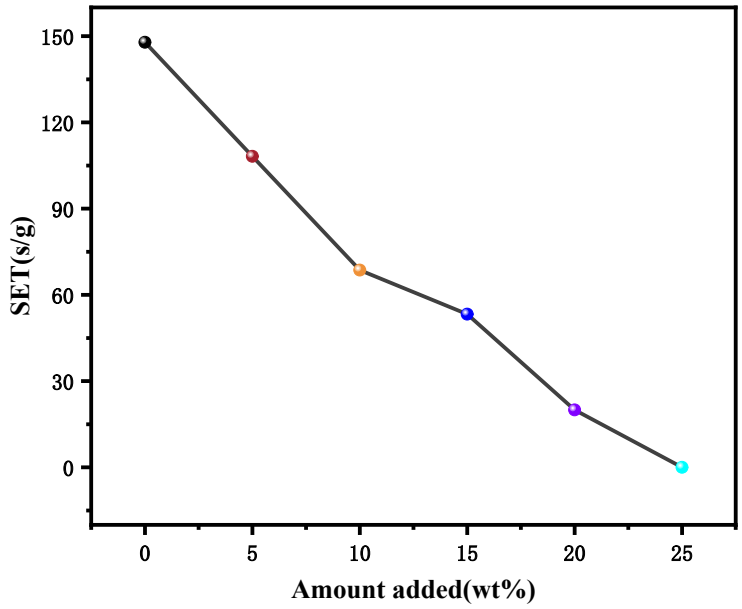


Fig S2. Self-extinguishing time test of different electrolyte

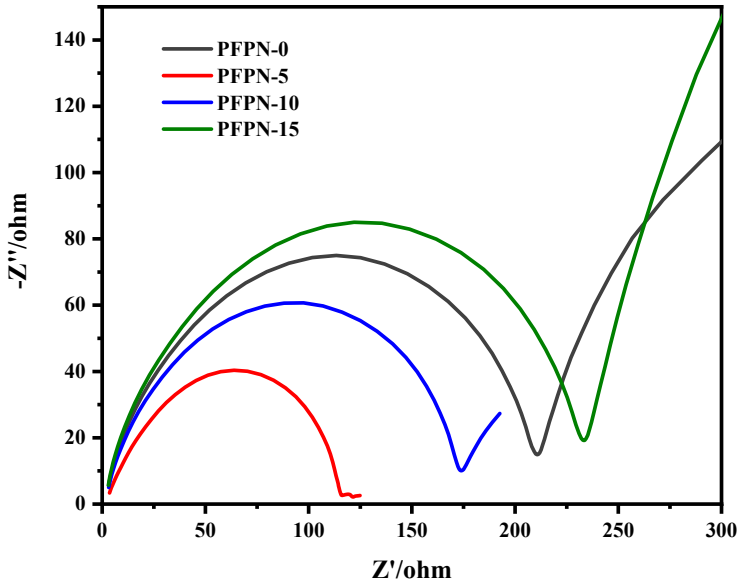


Fig S3. Electrochemical impedance spectra of Li-Li cells assembled with different electrolyte.

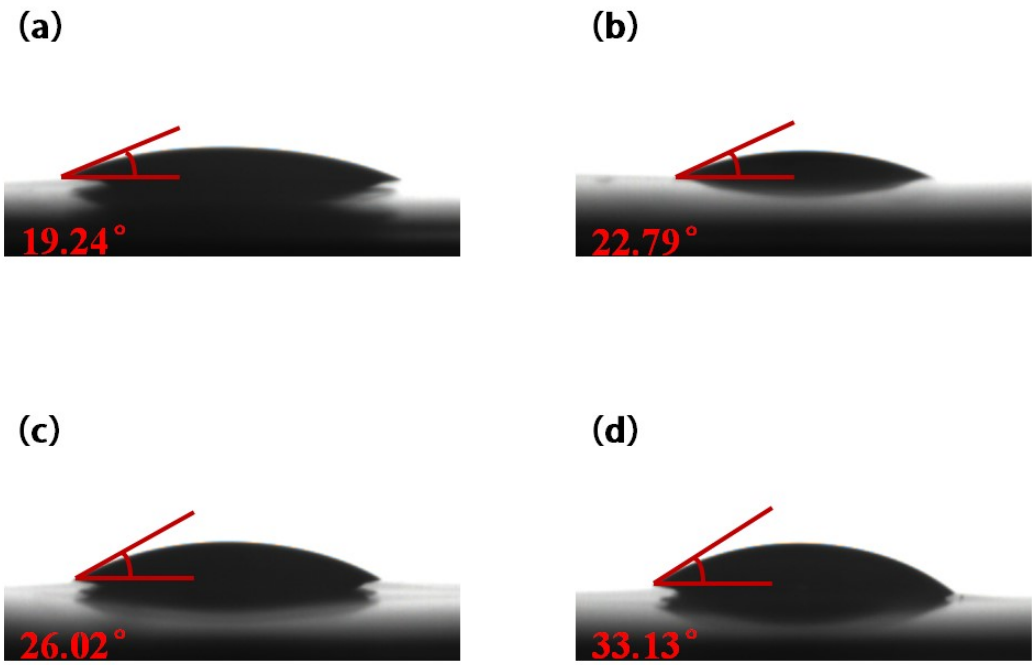


Fig S4. Contact angle measurement of different electrolytes on PP separator: (a) PFPN-0, (b) PFPN-5, (c) PFPN-10, (d) PFPN-15

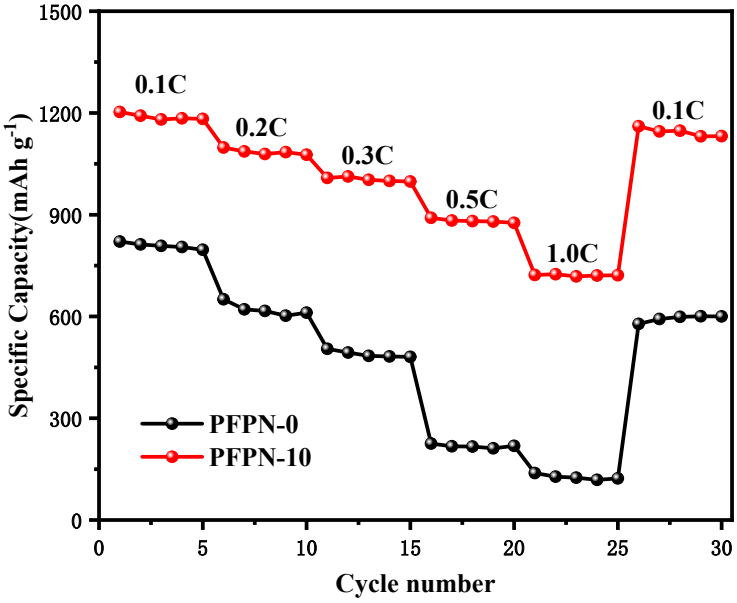


Fig S5. Rate capability of Li-S cells prepared from PFPN-0 and PFPN-10 electrolyte